

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 8. (Canceled).

9. (Currently Amended) A method of producing a cloned pig having an alpha-1,3-galactosyltransferase gene knocked out, comprising the steps of:

(a) preparing a nuclear donor cell by culturing a ~~somatic~~ a fetal fibroblast cell line collected from a pig;

(b) isolating an alpha-1,3-galactosyltransferase (GT) gene clone from a pig genomic BAC library ~~through a PCR method using primers prepared based on a pig GT cDNA sequence (GeneBank Accession No.: AF221517), and constructing a gene targeting vector comprising a nucleic acid sequence consisting of a part of intron 8, exon 9 and a part of intron 9 of a GT gene, wherein an AvaI-DraIII fragment of exon 9 is substituted with a nucleic acid sequence encoding a puromycin-resistant gene linked to an SV 40 poly(A) sequence using the isolated GT gene, wherein the vector carries a GT gene modified by substituting a portion of a GT gene with a gene encoding a selectable marker by homologous recombination to suppress expression of a normal GT protein;~~

(c) mixing the vector with a lipid or non-lipid component to form lipid (or non-lipid)-DNA complexes, and adding the resulting complexes to a culture medium of the nuclear donor cell to allow gene targeting by introducing the recombinant GT gene into the nuclear donor cell;

(d) transferring the nuclear donor cells transfected with the recombinant GT gene into an enucleated pig recipient oocyte to generate a transgenic nuclear transfer embryo, and activating the nuclear transfer embryo; and

(e) transplanting the nuclear transfer embryo into a surrogate mother pig to produce live offspring that do not have alpha-1,3-galactosyltransferase protein activity. ~~wherein the gene targeting vector at the step (b) comprises a nucleic acid sequence corresponding to a part of intron 8, exon 9 and a part of intron 9 of a GT gene, wherein an AvaI-DraIII fragment of said~~

~~exon 9 is substituted with a nucleic acid sequence encoding a puromycin resistant gene linked to an SV 40 poly(A) sequence.~~

10. (Previously presented) The method as set forth in claim 9, wherein the lipid component of the step (c) is FuGENE6.

11. (Currently Amended) A porcine nuclear transfer embryo designated "SNU-P2 [Porcine NT Embryo]", ~~which is prepared according to the steps (a) to (d) of claim 9, and deposited KCTC (Korean Collection for Type Cultures) under accession number KCTC 10146 BP.~~

12. (Currently Amended) A cloned pig having an alpha-1,3-galactosyltransferase gene knocked out, which is produced by the method comprising:

transferring an SNU-P2 [Porcine NT Embryo] into an enucleated pig recipient oocyte to generate a transgenic nuclear transfer embryo, and activating the nuclear transfer embryo; and
transplanting the nuclear transfer embryo into a surrogate mother pig to produce live offspring that do not have alpha-1,3-galactosyltransferase protein activity
~~from the porcine nuclear transfer embryo "SNU-P2 [Porcine NT Embryo]" of claim 9 performing the method at the step (c) of claim 9.~~

13. (Canceled).